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GB 2268207 A GB 2211233 A US 4003161 A
US 3698135 A

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(54) Retractable barrier post assembly

(57) A vehicle barrier comprising an elongate tubular base portion (10) for setting vertically below ground level and a post (11) telescopically mounted within said base (10). The post (11) can be manually moved between a retracted position, in which it lies below ground level, and an extended position, in which it projects above ground level, so as to block the access of vehicles. The post (11) can be locked in both the retracted and extended positions.

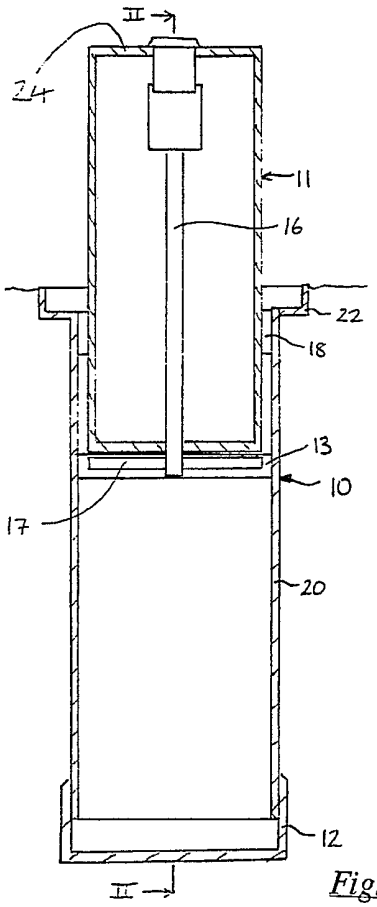

Figure 1

GB 2 281 927 A

At least one drawing originally filed was informal and the print reproduced here is taken from a later filed formal copy.

The claims were filed later than the filing date within the period prescribed by Rule 25(1) of the Patents Rules 1990.

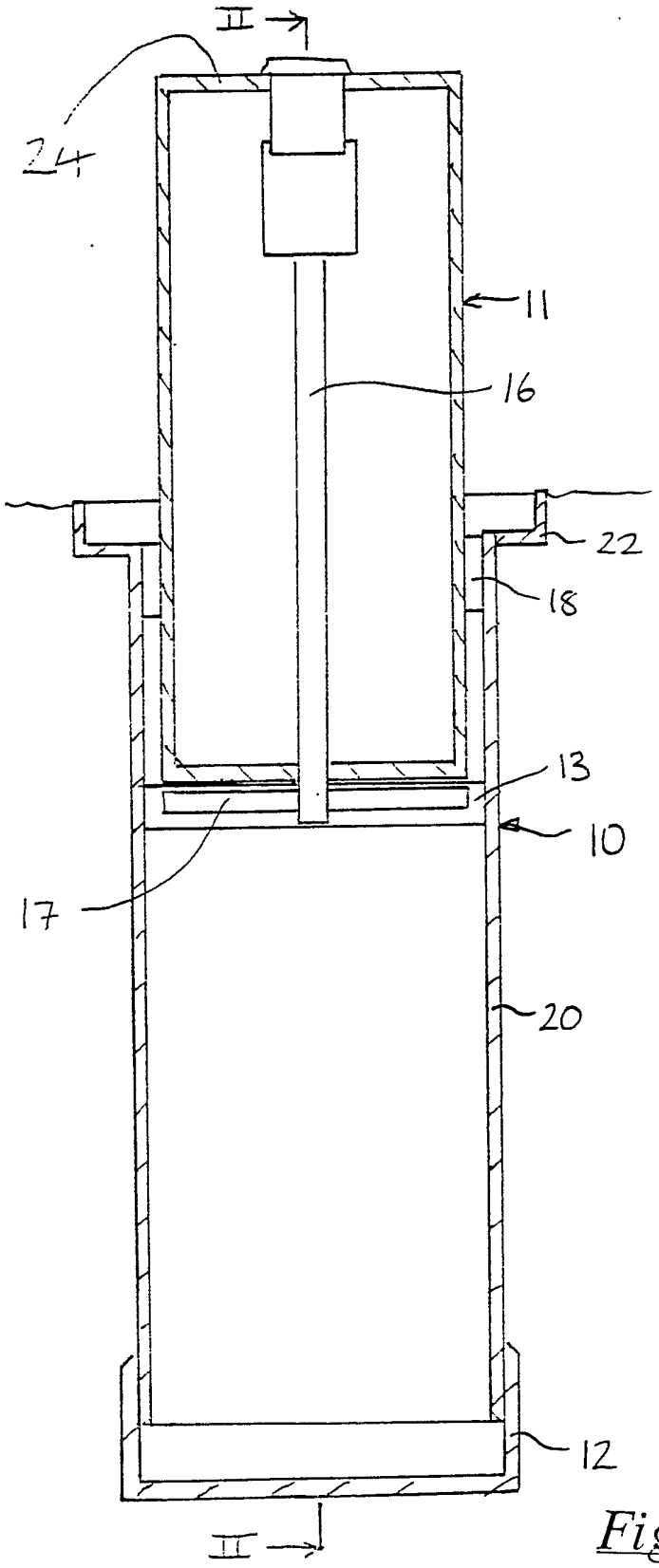

Figure 1

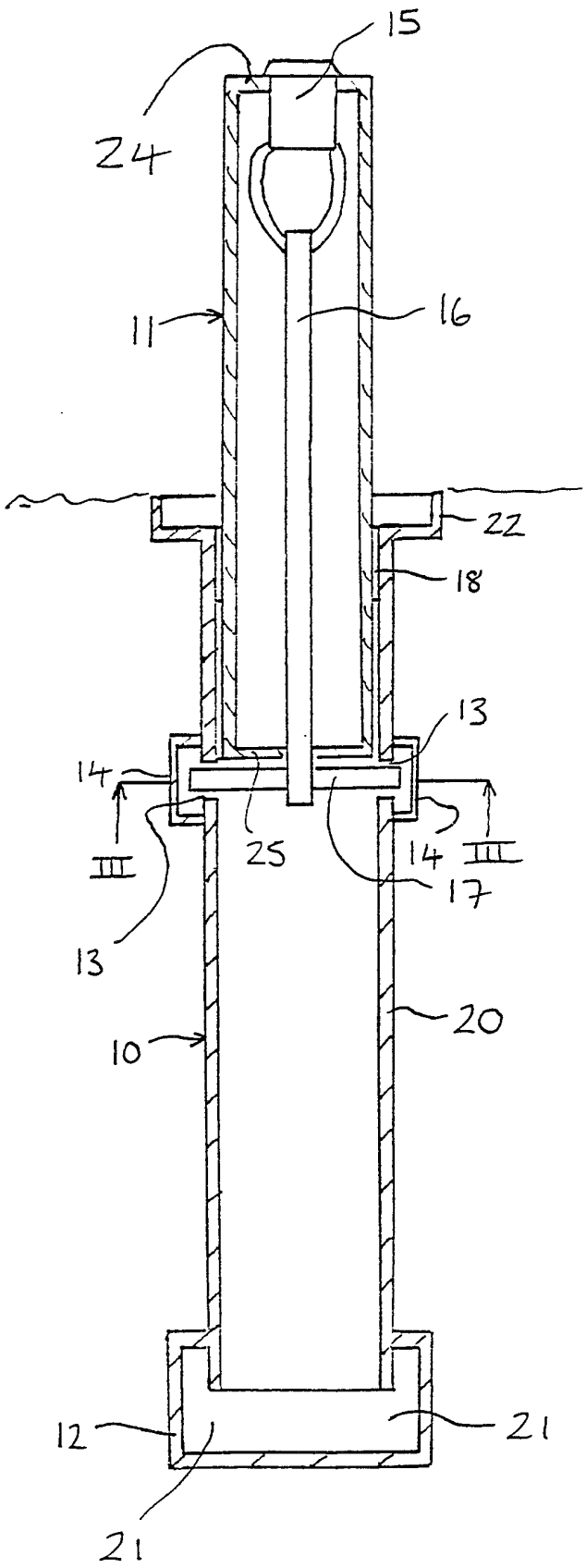

Figure 2

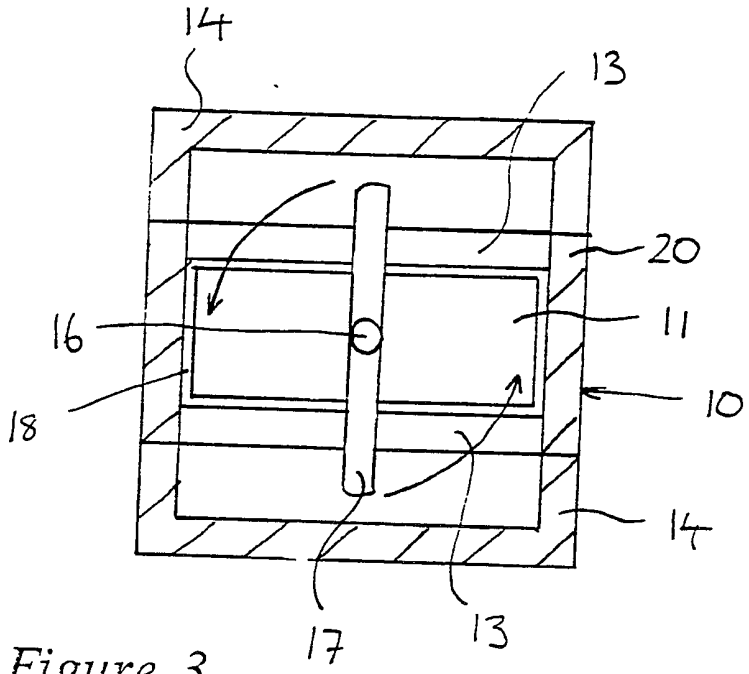

Figure 3

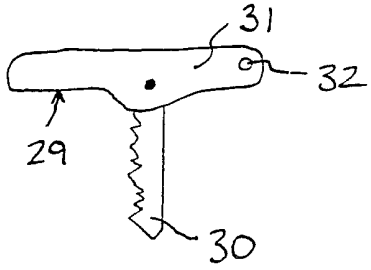

Figure 4

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Vehicle Barrier

This invention relates to a vehicle barrier.

Thefts of cars and other wheeled vehicles from driveways and parking spaces is commonplace. In order to combat these crimes, it is well known to fit additional security devices such as wheelclamps and steering wheel locks to vehicles. These security devices are inconvenient to fit each time the vehicle is left unattended, and they are also easily defeated by experienced thieves.

It is well known to obstruct driveways and parking spaces with collapsible posts which can be locked in the upright position. The posts are hinged to a baseplate which is bolted to the floor, so that when not in use the post can be hinged down to lie along the floor. Such posts are not suitable as a means to prevent theft of vehicles because they are not anchored to the floor strongly enough to withstand a small impact from a vehicle, thus it is relatively easy for a thief to steal the vehicle by ramming it into the post. Also, such posts are obstructive when they are not in use.

I have now devised a vehicle barrier which alleviates the above mentioned problems.

In accordance with this invention, there is provided a vehicle barrier comprising an elongate tubular base portion for mounting vertically below ground level and a post telescopically mounted to the base portion and manually movable between an extended position in which it projects above the level of the ground, and a retracted position in which it lies below ground level, and locking means for locking said post to said base portion in each of said extended and retracted positions of the post

Thus, in use the post can be locked in its extended position so as to obstruct the driveway or parking space in which it is fitted. The post prevents vehicles parked in the driveway or parking space from being stolen. The post is securely engaged into the base portion, which is buried or set in the ground, so that the post can withstand a relatively large impact without being knocked over.

When not in use, the post can be locked in its

retracted position inside the base portion, so that it does not cause an obstruction on the ground. The post cannot be removed or stolen because it is locked in its retracted position.

Preferably the locking means is key-operated and preferably its keyhole is disposed in an upper end wall of the post.

Preferably a key which is used locks in engagement with the post when the post is unlocked from the base portion. Thus the user can raise or lower the post single-handedly, using the key as a handle.

Preferably the key comprises an enlarged handle. The bit of the key is preferably foldable into the handle when it is not in use.

Preferably the post is sealed to the base portion, to prevent the ingress of dirt and water into the base portion.

Preferably the locking element comprises a lock connected by an elongate shaft to a catch rotatably mounted adjacent the lower end of the post.

Preferably the catch engages with a slot formed in a side wall of the base portion when the post is locked in position.

An embodiment of this invention will now be described by way of example only, and with reference to the accompanying drawings, in which:

FIGURE 1 is a longitudinal sectional view through a vehicle barrier in accordance with this invention, when the post of the barrier is in its extended position;

FIGURE 2 is a sectional view along the line II-II of Figure 1, when the post is locked in its extended position;

FIGURE 3 is a sectional view along the line III-III of Figure 2; and

FIGURE 4 is a side view of a key for the barrier.

Referring to Figures 1 to 3 of the drawings, there is shown a vehicle barrier comprising an elongate base portion 10, and an elongate post 11 telescopically mounted to the base portion 10. The base portion 10 comprises a tube 20 which is rectangular in cross-section. Horizontal slots 13 are formed in a pair of opposite side walls of the tube 20 towards but

spaced from its upper end. The slots 13 are formed in the two opposite side walls which are the closer together. Shrouds 14 are disposed on the outside of the tube 20 to cover the slots 14. The lower end of the tube 20 is closed by a capping element 12 which is arranged to form slots 21 in said two side walls at the lower end of the tube 20. The upper end of the tube 20 is provided with a peripheral flange 22.

The post 11 comprises an elongate tube 23 which is a close but sliding fit inside the base portion 10. A seal 18 is mounted to the inside of the base portion 10 at its upper end, to seal against the post 11 in order to prevent the ingress of water and dirt into the base portion 10. The tube 23 is closed at its upper and lower ends by end walls 24,25. A lock 15 is disposed in the upper end wall 24. The lock is connected via a elongate shaft 16 to a catch 17 rotatably mounted below the lower end wall 25.

In use, the base portion 10 of the barrier is buried or set in the ground such that the upper edge of the flange 22 lies level with the surface of the ground.

Referring to Figure 4, there is shown a key 29 for the barrier. The key 29 comprises an elongate metal bit 30 hinged at one end to the central portion of a handle 31. In use, the bit 30 can be hinged out so that it lies perpendicular to the handle 31. When not in use, the bit 30 can be hinged down to lie within the handle 31. An aperture 32 is formed in the handle so that the key 29 can be attached to a keyring.

The post 11 can be raised and locked in position as follows. Firstly the bit 30 of the key 29 is inserted into the lock 15, then the key is turned through 90° to unlock the post 11 from its retracted position. In the unlocked state, the key 29 becomes fixed in engagement with the top end of the post, so that the post can be raised single-handedly by lifting the key 29 upwards. Stops (not shown) engage when the post 11 reaches its fully extended position, and the user can then turn the key back through 90°, so that the ends of the catch 17 engage into the slots 13: the user can then remove the key 29. A substantial portion of the lower end of the post 11, when extended, remains within the base portion 10, so that the post

11 remains securely anchored to the ground.

To lower the post 11, the user inserts his key 29 and rotates it through 90°, thereby disengaging the ends of the catch 17 from the slots 13: the key 29 becomes fixed in engagement with the lock 15, so that the post 11 can then be lowered single-handedly using the key 29. Once the post 11 is fully retracted it can be locked in position by turning the key 29 back through 90°. The ends of the catch 17 engage into the slots 21 at the bottom of the base portion, thereby preventing the post 11 from being removed or tampered with.

The post can be raised and lowered quickly and conveniently using the key, thus the user does not have to waste time each time he uses or leaves his vehicle.

Preferably the barrier is mounted in a position which is adjacent the unattended vehicle, so that it is not possible for a thief to move the vehicle at a speed sufficient enough to bend the post 11. The barrier is the most effective when it is mounted in a position to block the vehicle up against a fixed structure such as a garage door. It will be appreciated that the barrier can be used to prevent the theft of boats, caravans, trailers etc. from their parking spaces.

Claims

1) A vehicle barrier comprising an elongate tubular base portion for mounting vertically below ground level and a post telescopically mounted to the base portion and manually movable between an extended position in which it projects above the level of the ground, and a retracted position in which it lies below ground level, and locking means for locking said post to said base portion in each of said extended and retracted positions of the post.

2) A vehicle barrier as claimed in claim 1, in which the locking means is key-operated.

3) A vehicle barrier as claimed in claim 2, in which a key-hole of the key-operated locking means is disposed in an upper end-wall of the post.

4) A vehicle barrier as claimed in claims 2 or 3, comprising a key which locks in engagement with the post when the latter is unlocked from the base portion.

5) A vehicle barrier as claimed in claim 4, in which the key comprises an enlarged handle.

6) A vehicle barrier as claimed in claim 5, in which the key comprises a bit which is foldable into the handle.

7) A vehicle barrier as claimed in any preceding claim, in which the post is sealed to the base portion.

8) A vehicle barrier as claimed in any preceding claim, in which the locking element comprises a lock connected by an elongate shaft to a catch rotatably mounted adjacent the lower end of the post.

9) A vehicle barrier as claimed in claim 8, in which the catch engages with a slot formed in a side-wall of the base

portion when the post is locked in position.

10) A vehicle barrier substantially as herein described with reference to the accompanying drawings.

Patents Act 1977
Examiner's report to the Comptroller under Section 17 (The Search report)

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Relevant Technical Fields

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(ii) Int Cl (Ed.5) E01F 13/00

Search Examiner
D HAWORTH

Date of completion of Search
1 DECEMBER 1994

Databases (see below)
(i) UK Patent Office collections of GB, EP, WO and US patent specifications.

(ii)

Documents considered relevant following a search in respect of Claims :-
1-10

Categories of documents

X: Document indicating lack of novelty or of inventive step.

Y: Document indicating lack of inventive step if combined with one or more other documents of the same category.

A: Document indicating technological background and/or state of the art.

P: Document published on or after the declared priority date but before the filing date of the present application.

E: Patent document published on or after, but with priority date earlier than, the filing date of the present application.

&: Member of the same patent family; corresponding document.

Category	Identity of document and relevant passages		Relevant to claim(s)
X	GB 2268207 A	(HIGGINSON ET AL)	1-10
X	GB 2211233 A	(HIGGINSON ET AL)	1-10
X	US 4003161 A	(COLLINS)	1-10
X	US 3698135 A	(BOOTS ET AL)	1-10

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